POWER

ADN-C Series 3-Phase

120-960 Watts

Data Sheet

Total Power: 120-960 Watts
Input Voltage: 380-480 Vac
 # Outputs: Single

RoHS 6/6 COMPLIANT

SPECIAL FEATURES

- Slim form factor
- Five year warranty
- High efficiency up to 94%
- Full power at 60 °C
- Power Boost™
- Industrial grade design
  - Metal case
- MTBF > 500,000h
- Adjustable output
- Overvoltage protection with auto recovery
- Continuous short circuit and overload protection
- New visual diagnostic LED
- Three Status LEDs
  - Input
  - Output
  - Alarm
- DC OK relay
- Parallel operation capability
- Screw terminal connections
- RoHS compliant
- No tools required for mounting

SAFETY

- UL508, cULus Listed
- UL 60950-1, cURus 2nd edition
- IEC60950-1 2nd edition
- Class I, Div 2 Hazardous Locations
- IP20
- CE

Electrical Specifications

Input	
Nominal voltage	380 - 480 Vac
AC input range	320 - 540 Vac
DC input range	450 - 760 Vdc for ADN5, ADN10 & ADN20
Frequency	50 - 60 Hz
Efficiency	Up to 94%
PFC	Active power factor correction for ADN20 & ADN40; meet EN61000-3-2 Class A
Phase input	ADN5 and ADN10 will operate with single phase input at 100% load Derate to 75% and 50% for ADN20 and ADN40 respectively under loss of 1 phase; Units will shut down if thermal threshold is exceeded under this condition
Output	
Nominal voltage	24 V (24.0 - 28.0 Vdc Adj.)
Hold-up time	> 20 ms for ADN5, ADN10 & ADN20; > 15 ms for ADN40
Voltage regulation	< ± 2% overall
Ripple	< 100 mVpp
Current limit	PowerBoost™
Peak current	2x nominal current for < 2 sec for ADN5 & ADN10; 1.5x nominal current for 4 seconds minimum while holding voltage > 20 Vdc for ADN20 & ADN40
Parallel operation	Single or parallel operation selectable via front switch. For redundant operation use of external diode module is preferred; ADN40 uses active paralleling
Power back immunity	< 35 V
Overvoltage protection	> 30.5 Vdc, but < 33 Vdc, auto recovery

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General Specifications

EMC emissions	EN61000-6-3:2001, Class B EN55011, EN55022 Radiated and Conducted including Annex. A, EN61000-3-2
EMC immunity	EN61000-6-1:2001, EN61000-6-2:2001, EN61000-4-2 Level 4, EN61000-4-3 Level 3, EN61000-4-6 Level 3, EN61000-4-4 Level 4 input and level 3 output. EN61000-4-5 Isolation class 4, EN61000-4-11, Semi F47 sag immunity
Warranty	5 Years
General protection safety	Protected against continuous short-circuit, overload, open-circuit. Protection Class 1 (IEC536), degree of protection IP20 (IEC 60529) Safe low voltage: SELV (acc. EN60950)
Status indicators	Visual: 3 status LEDs (Input, Output, Alarm) Relay: SSR or dry relay contact, signal octive when Vout = 18.5 vdc + 5%

LED Diagnostics

LED	OK	Loss of Ac	Low Ac	No Dc	High Load	Overload	Hot	Too Hot
Input	Green	---	Yellow	Green	Green	Green	Green	Green
Output	Green	---	Green	---	Yellow	Yellow	Green	---
Alarm	---	---	---	Red	Yellow	Red	Yellow	Yellow

Environmental Specifications

Storage/shipment	-40 °C to + 85 °C
Operation (convection)	Full Load -25 °C to + 60 °C derate to 50% load at +70 °C
	Up to 50% load permissable with horizontal or on top mounting orientation
Humidity	< 90% RH, non-condensingl IEC 60068-2-2, 68-2-3

Other Features

Fusing	Input externally fused; output not fused, output is capable of providing high currents (PowerBoost) for motor load startup
Mounting orientation	Standard: Vertical, Optional: Horizontal or on Top Simple snap-on to DIN TS35/7.5 or TS35/15 rail system
Ventilation	Normal convection, No fan required
Cooling spacing	ADN5: 15 mm in front, 25 mm above and below ADN10: 15 mm in front, 25 mm above and below ADN20: 25 mm in front, left and right; 70 mm above and below ADN40: 15 mm in front, 70 mm above and below, 25 mm left and rightt
Connections	Input: Screw terminals, connector size range: 16-10 AWG (1.5-6 mm^2) for solid conductors Output: Connector size range: 16-10 AWG (1.5-6 mm^2) for ADN5, ADN10 and ADN20 solid conductors; 6-7 AWG for ADN40

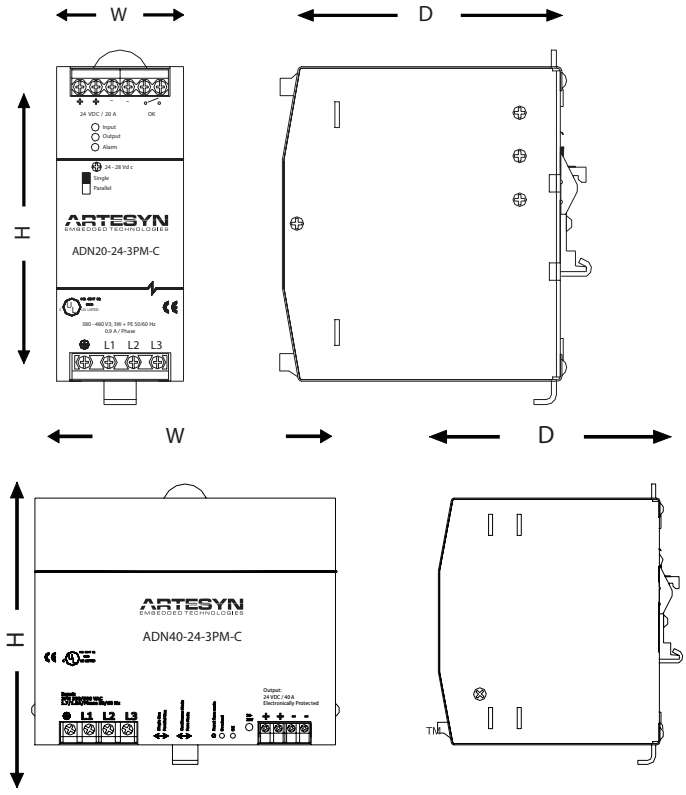
Ordering Information

Model Number	Power	Input Voltage	Weight	Current	Efficiency	Case Type	MTBF
ADN5-24-3PM-C	120 W	320 - 540 Vac 450 - 760 Vdc	1.15 lbs (520 g)	5 A @ 24 Vdc	85.0%	Metal	> 500,000 hours Nominal voltage, full load, Tamb=25 °C
ADN10-24-3PM-C	240 W		1.54 lbs (700 g)	10 A @ 24 Vdc	91.2%		
ADN20-24-3PM-C	480 W		2.8 lbs (1300 g)	20 A @ 24 Vdc	93.0%		
ADN40-24-3PM-C	960 W	320 - 540 Vac	5.3 lbs (2400 g)	40 A @ 24 Vdc	94.0%		

Dimensions

	Height	Width	Depth
ADN5-24-3PM-C	4.85 in (123 mm)	1.97 in (50 mm)	4.36 (111 mm)
ADN10-24-3PM-C	4.85 in (123 mm)	2.36 in (60 mm)	4.36 (111 mm)
ADN20-24-3PM-C	4.85 in (123 mm)	3.34 in (85 mm)	4.68 (119 mm)
ADN40-24-3PM-C	4.85 in (123 mm)	7.09 in (180 mm)	4.85 in (123 mm)

Mechanical Drawing



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